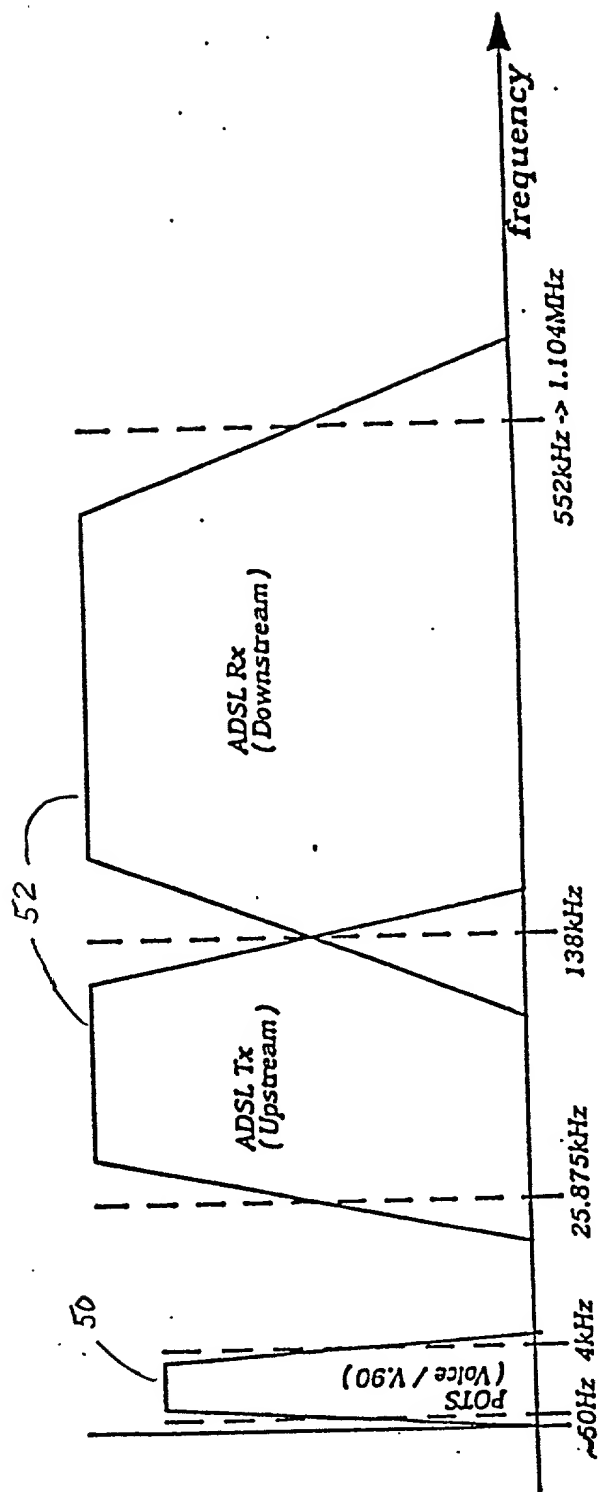


Fig 1
Prior Art



Prior Art

Fig 2

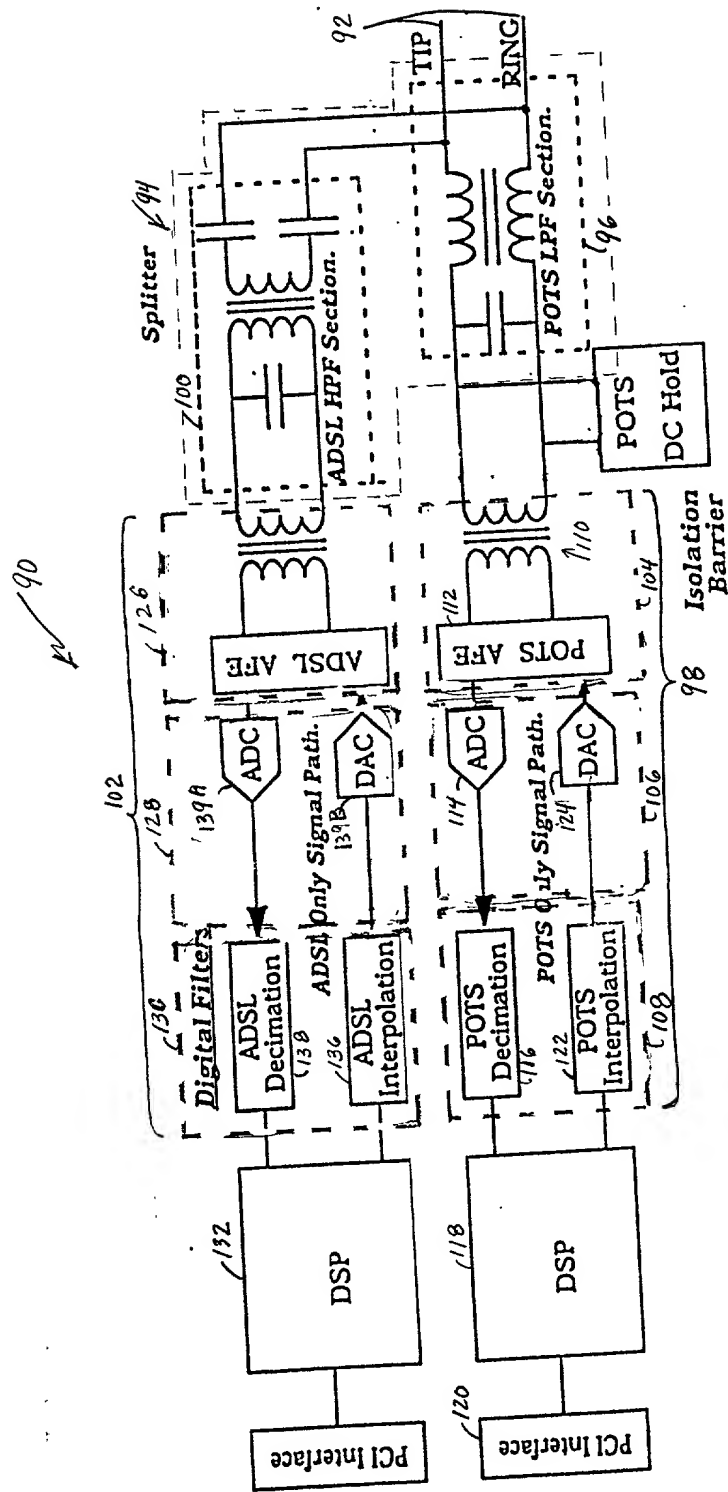


Fig. 3 Prior Art

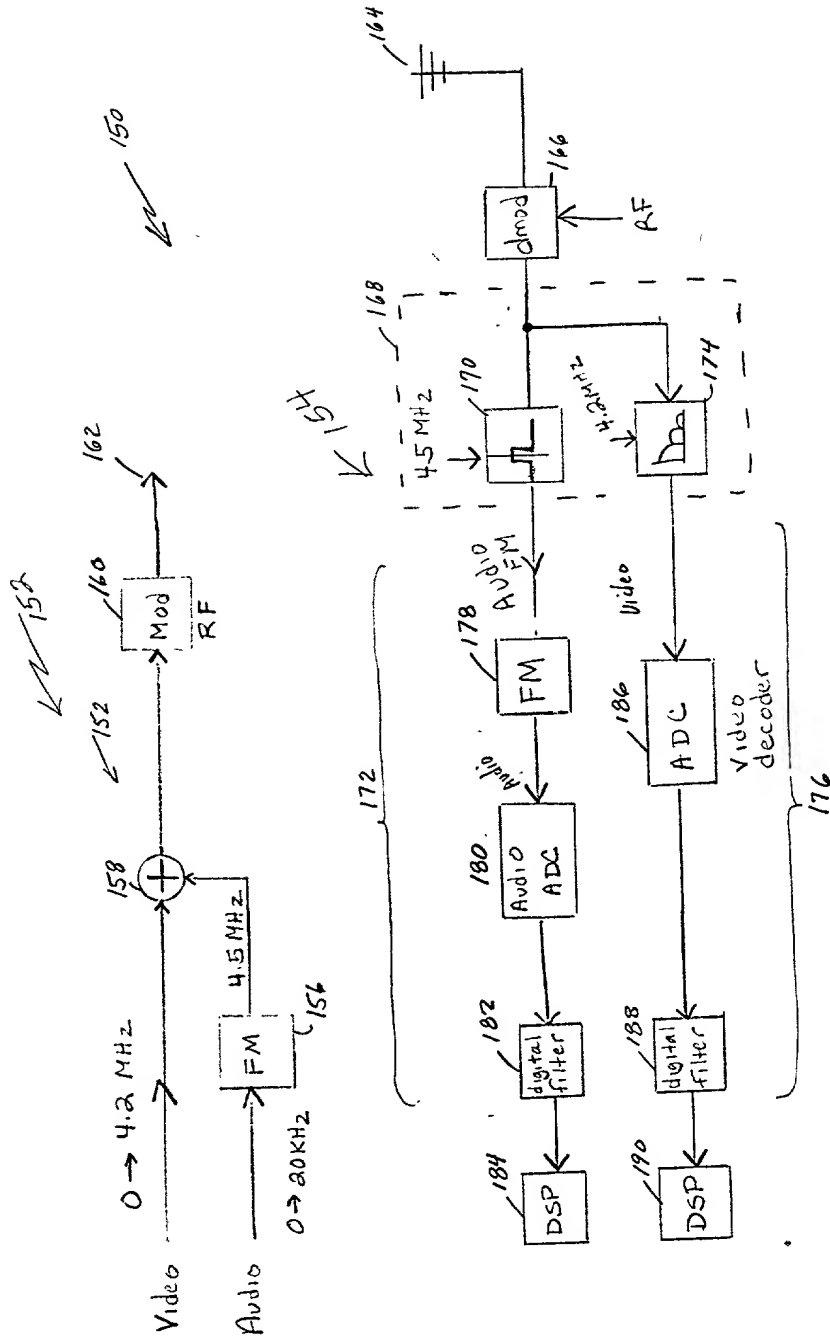


Fig 4 Prior Art

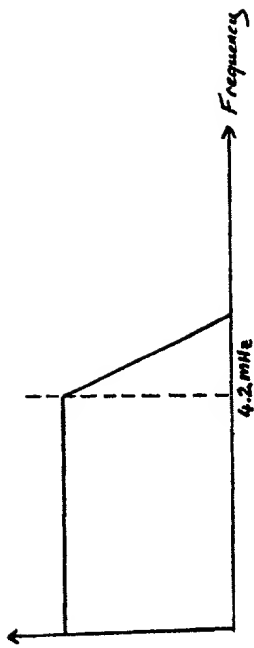


Fig. 5 Prior Art

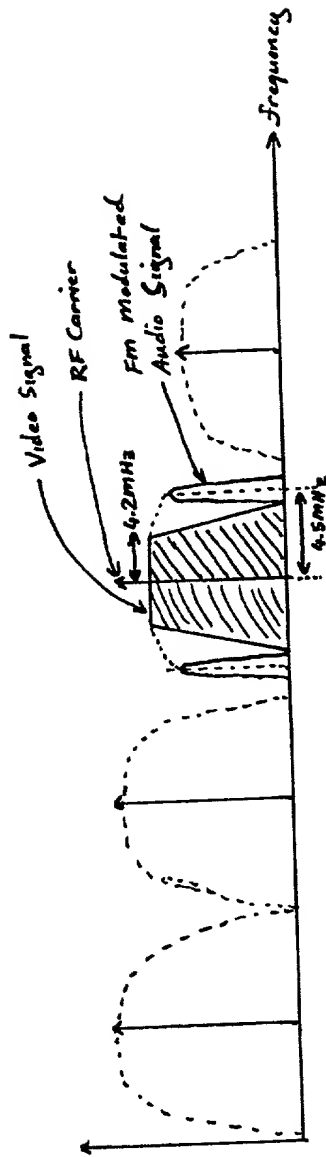


Fig. 6 Prior Art

FIG. 7 is a block diagram of a prior art echo canceller system. The system includes a DAC (Digital-to-Analog Converter) and an ADC (Analog-to-Digital Converter) connected to a Hybrid Network (199). The Hybrid Network (199) includes a Gain block (194) and an Echo Cancel block (198). The input Tx is processed by the DAC and then the Gain block (194). The output of the Gain block (194) is fed into the Echo Cancel block (198) and also into a Zt block (196). The output of the Zt block (196) is fed into the Echo Cancel block (198). The output of the Echo Cancel block (198) is fed into a summing junction (197) and also into the ADC. The output of the ADC is fed into the DAC. The summing junction (197) also receives input from the Rx (Receiver) and outputs the sum (Tx + Rx) to the Splitter / Phone Line.

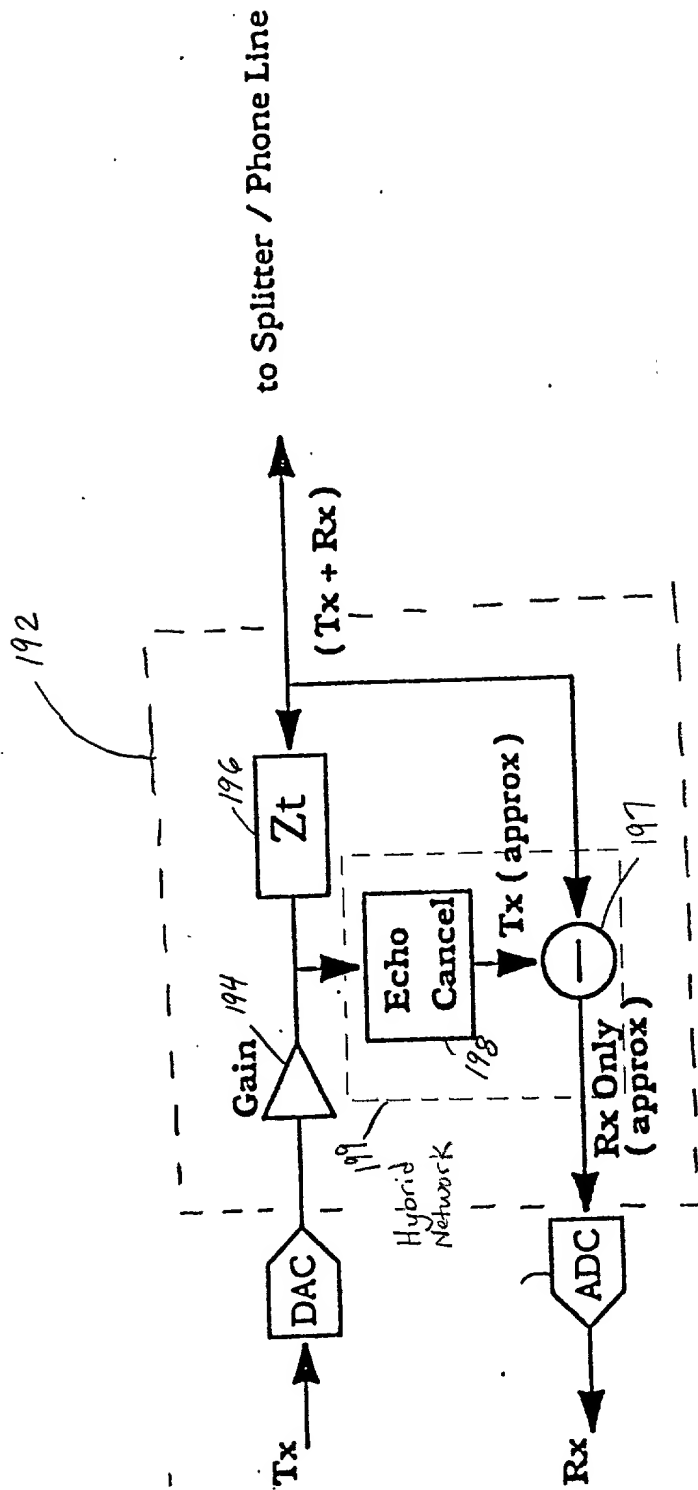


Fig. 7 Prior Art

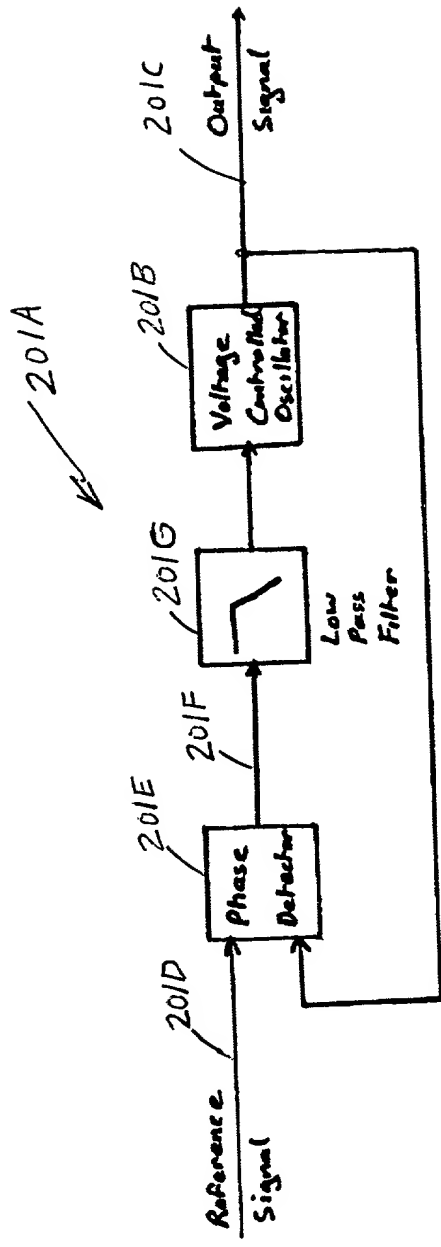


Fig 8 Prior Art

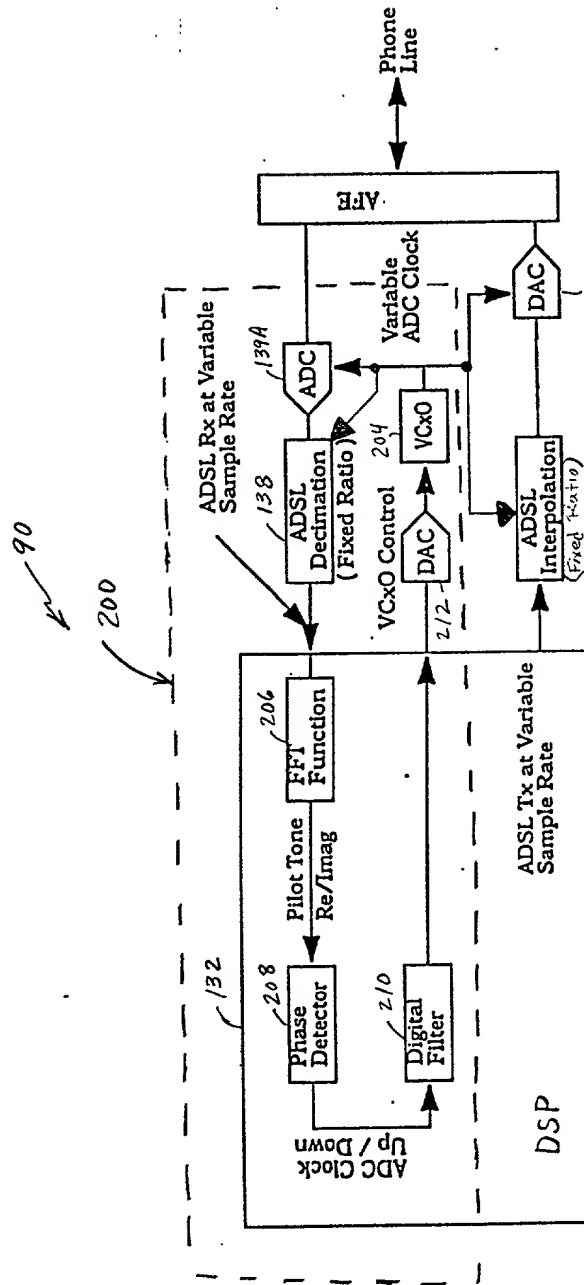


Fig. 9 Prior Art

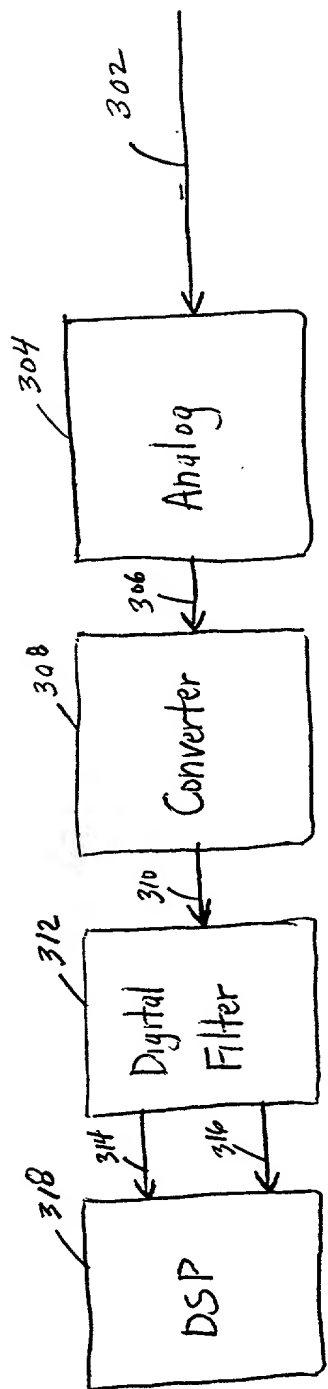


Fig. 10

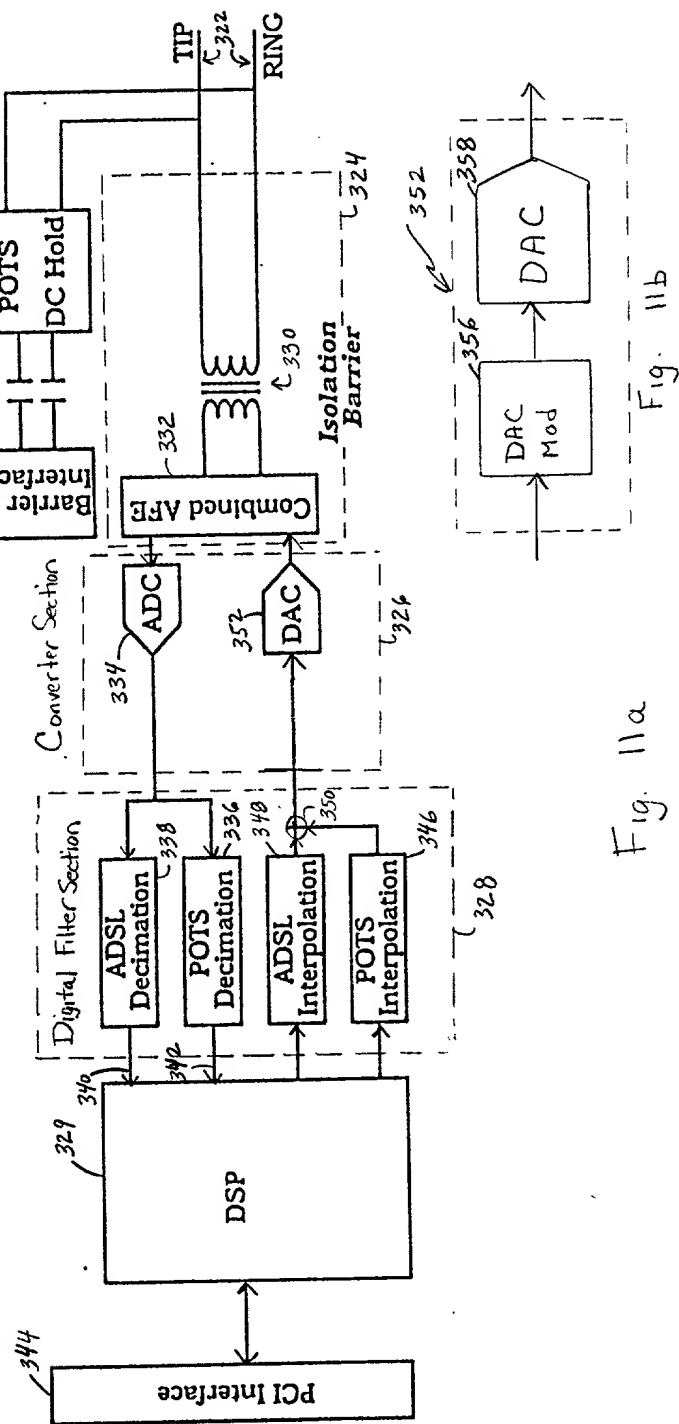


Fig. 11a

Fig. 11b

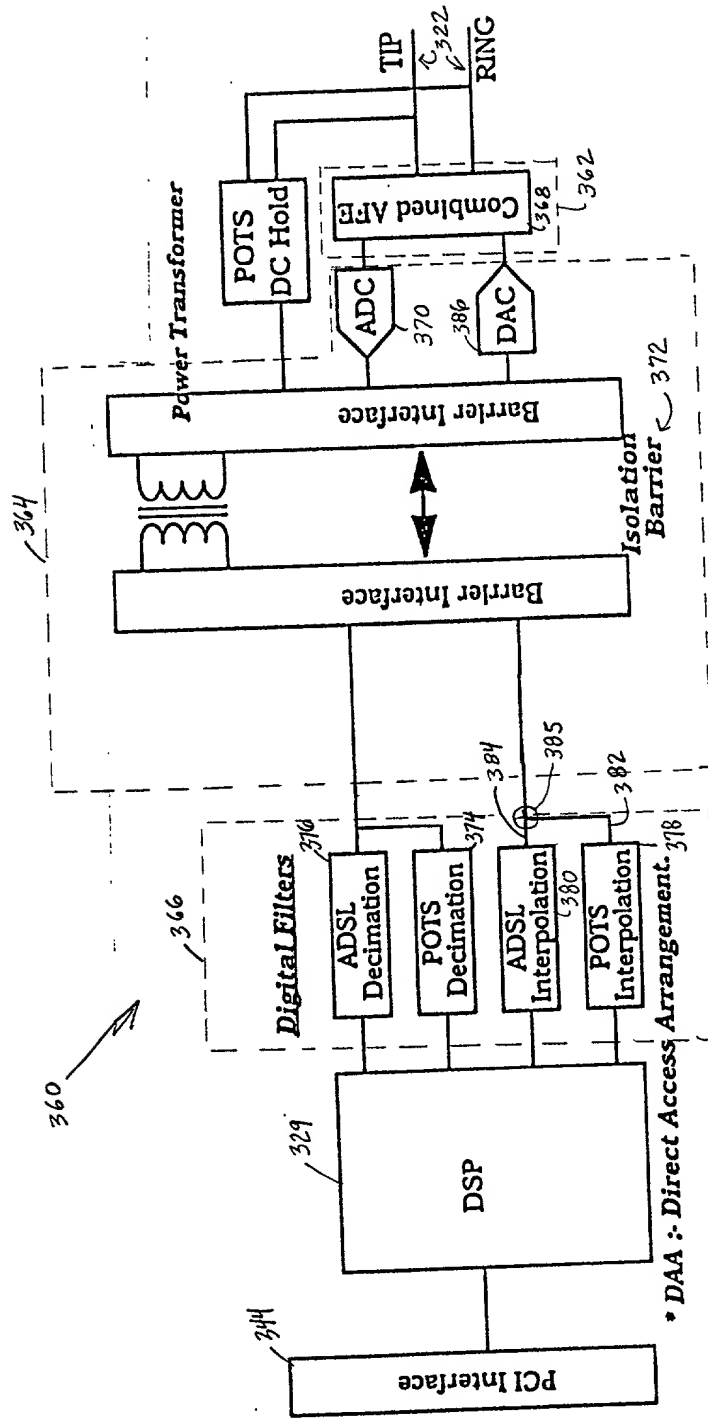


Fig. 12a

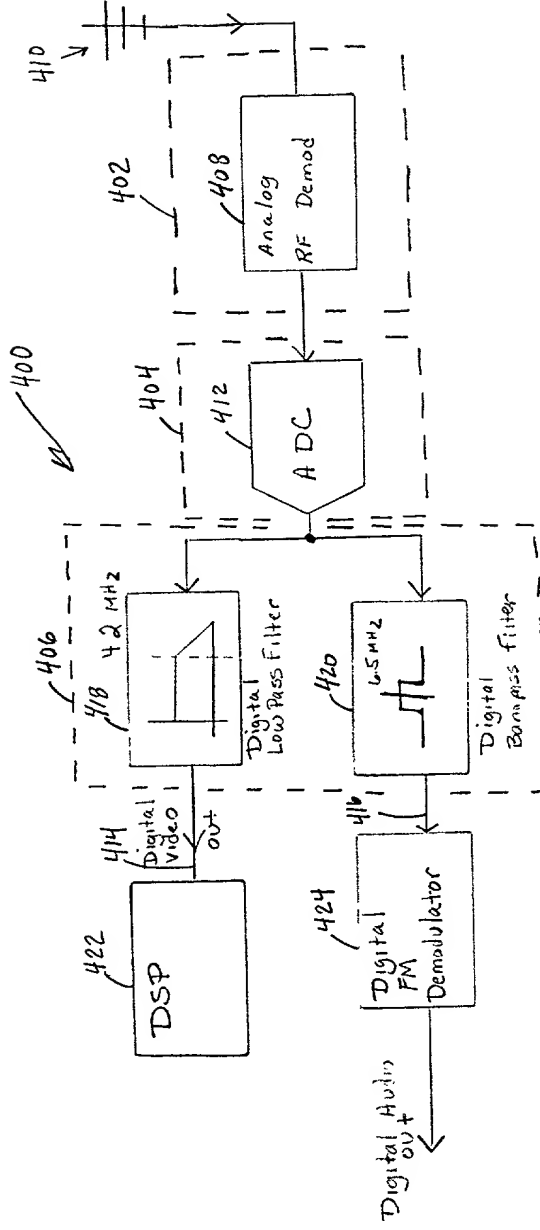


Fig. 13

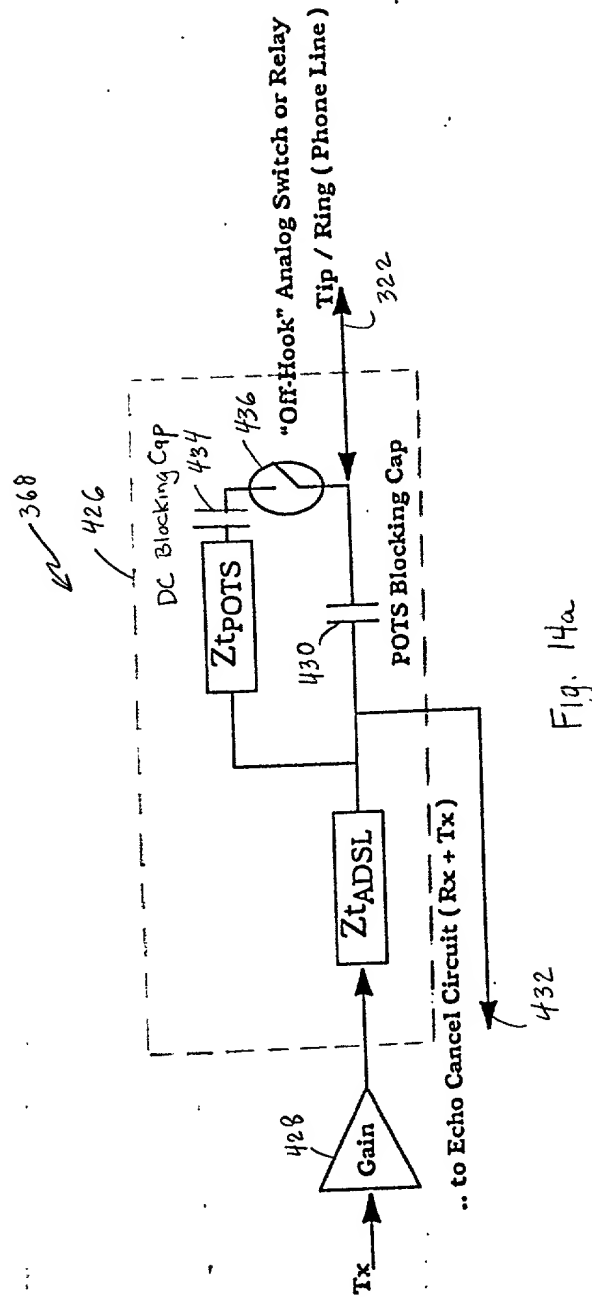


Fig. 14a

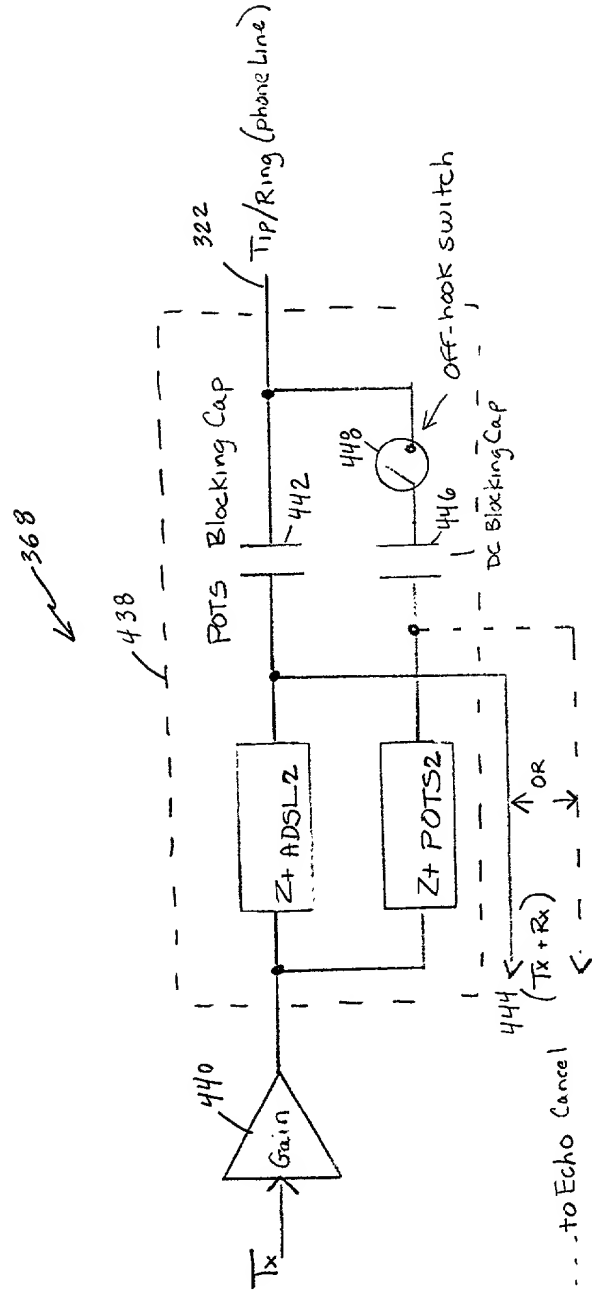


Fig 14b

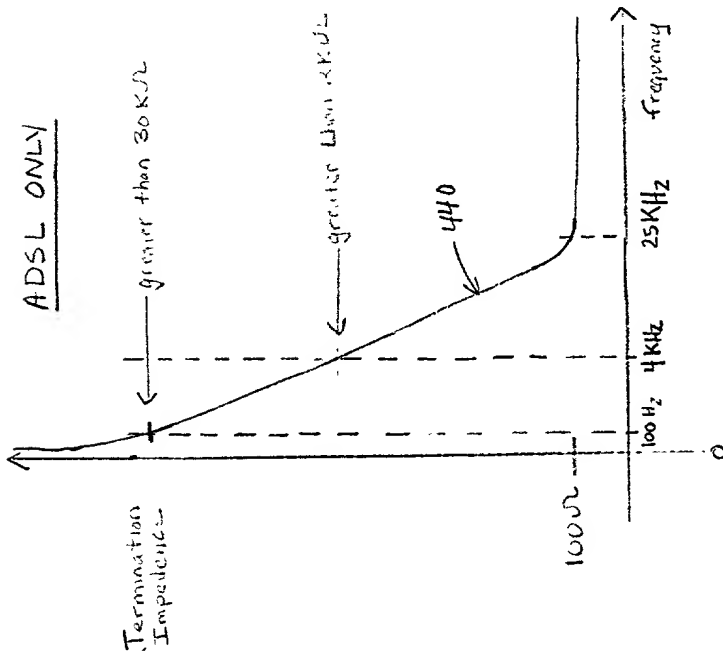


Fig 15a

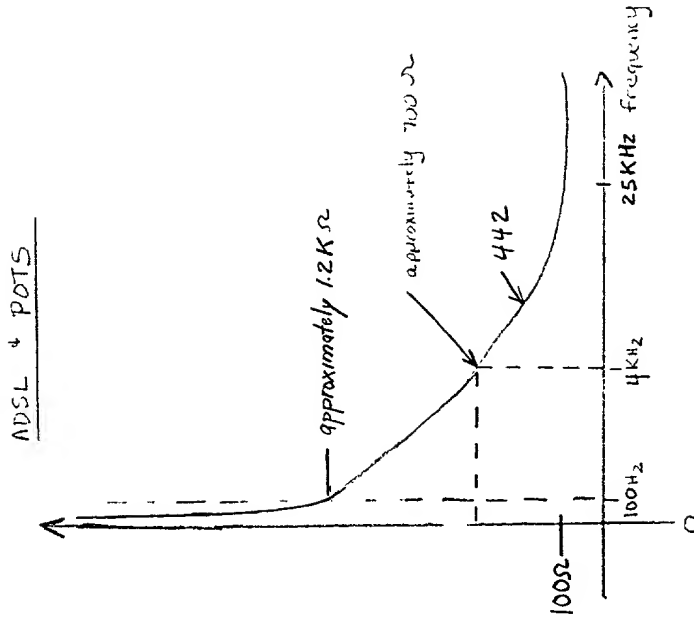


Fig. 15b

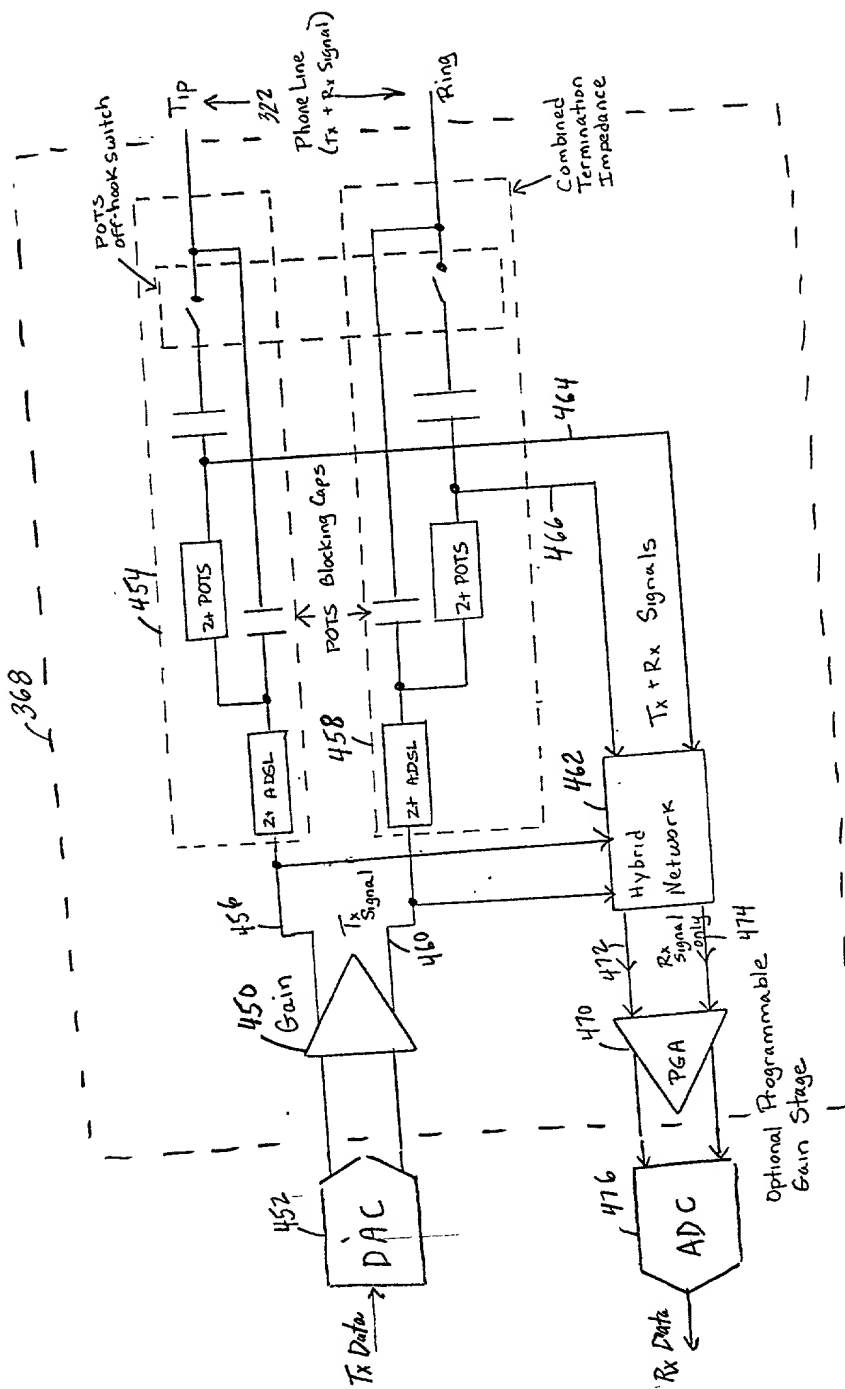
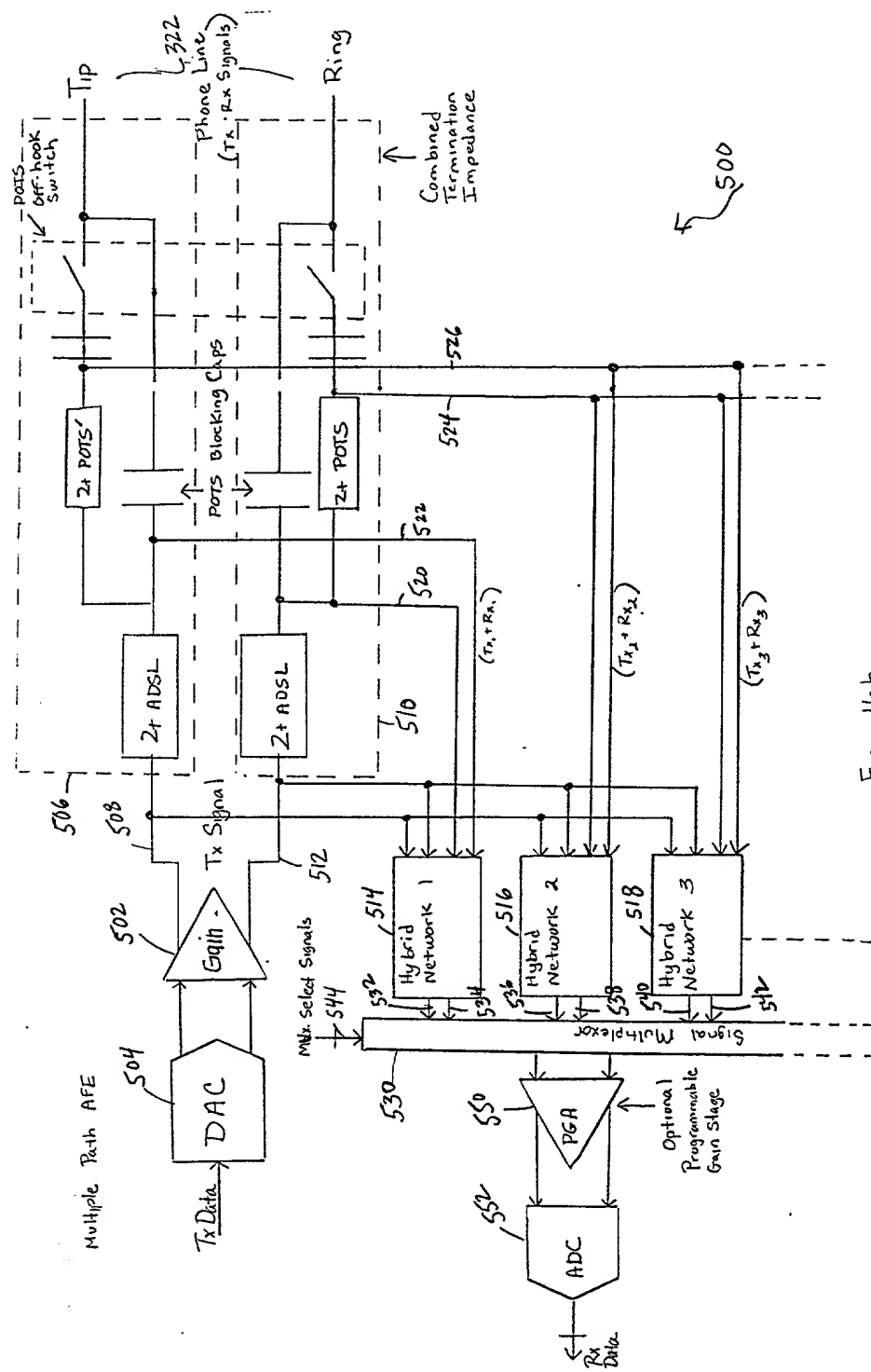


Fig 16a



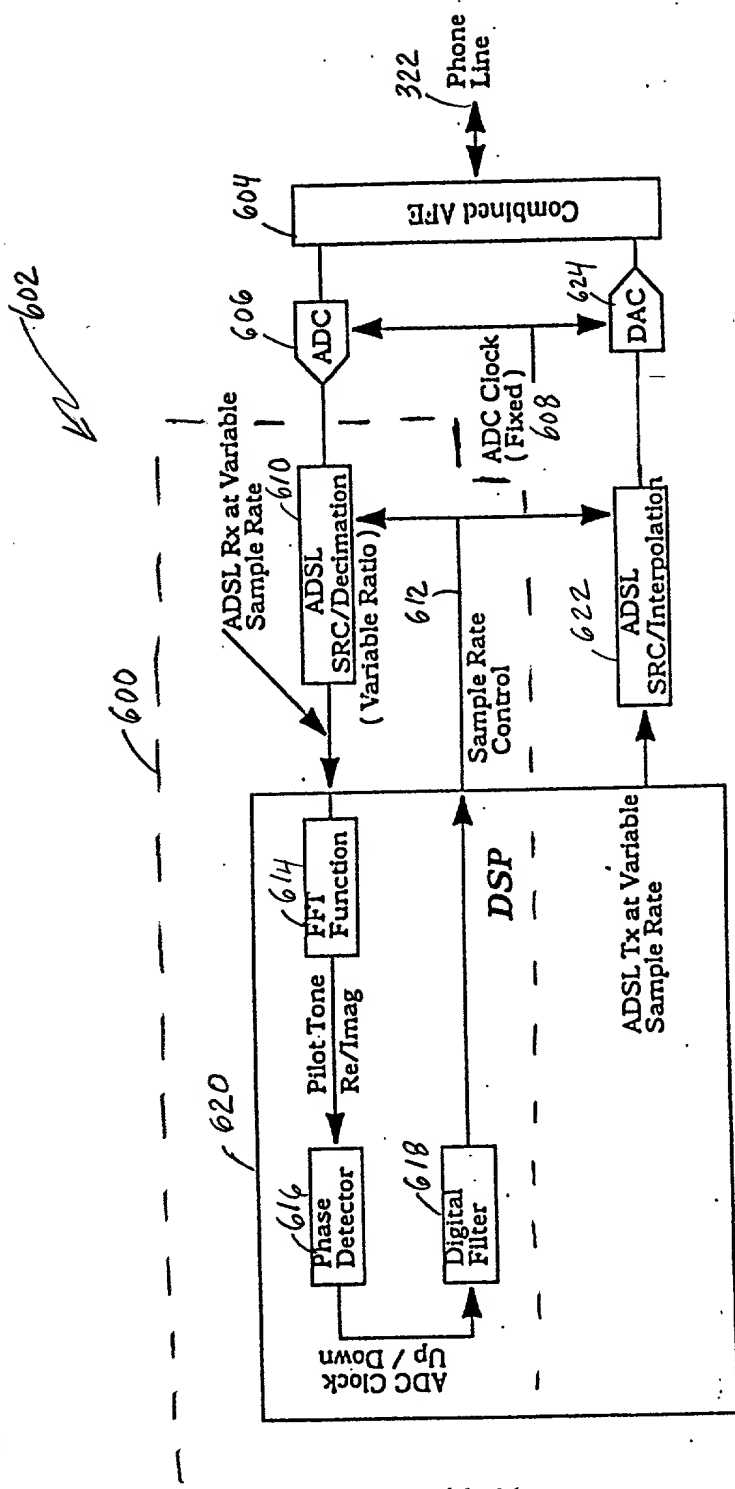


Fig. 17

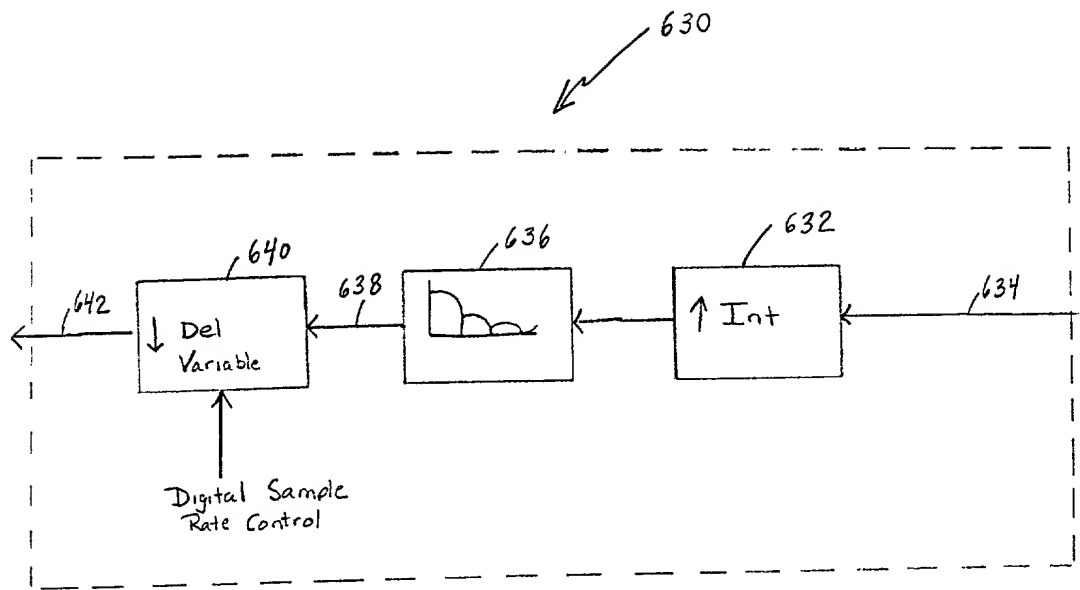


Fig 18

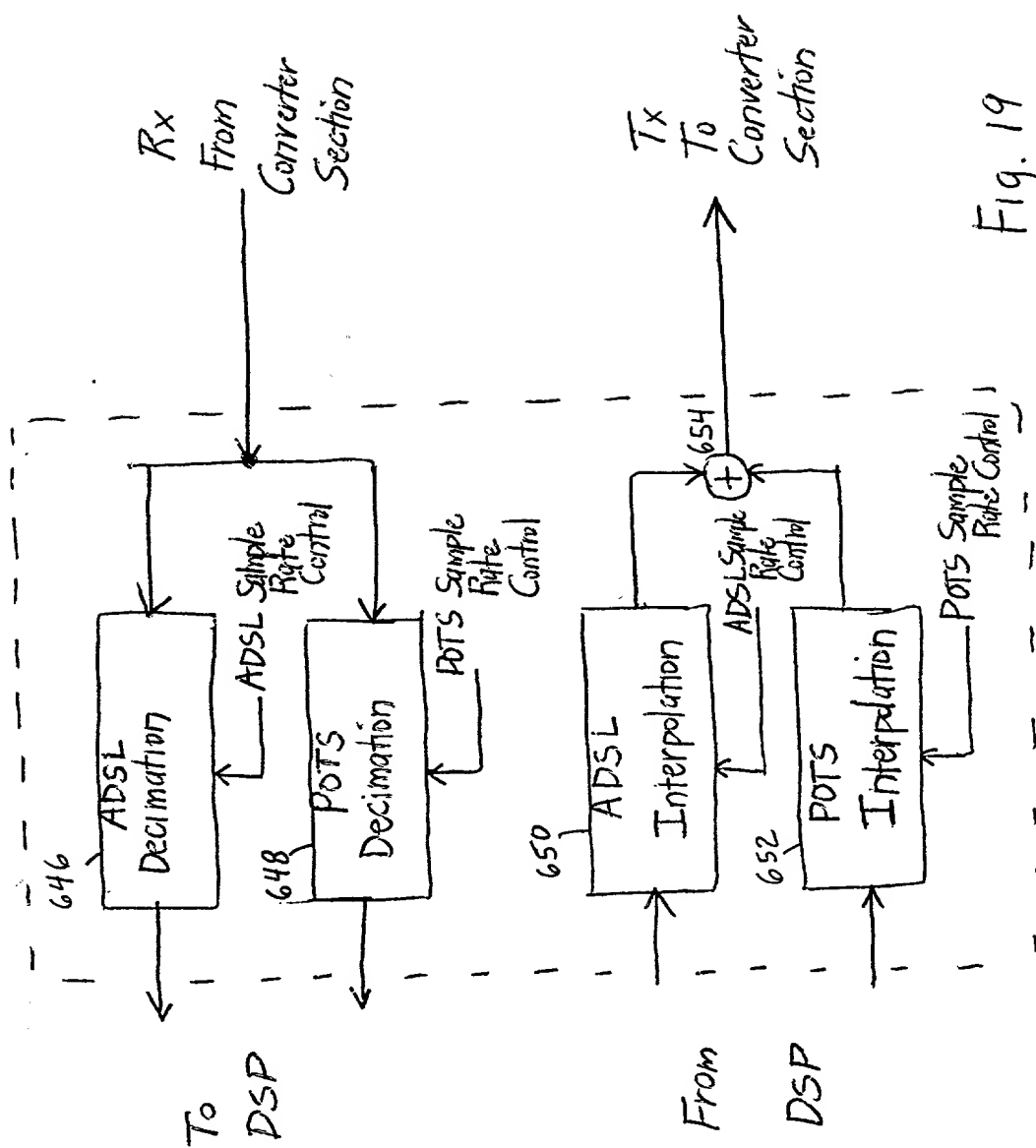
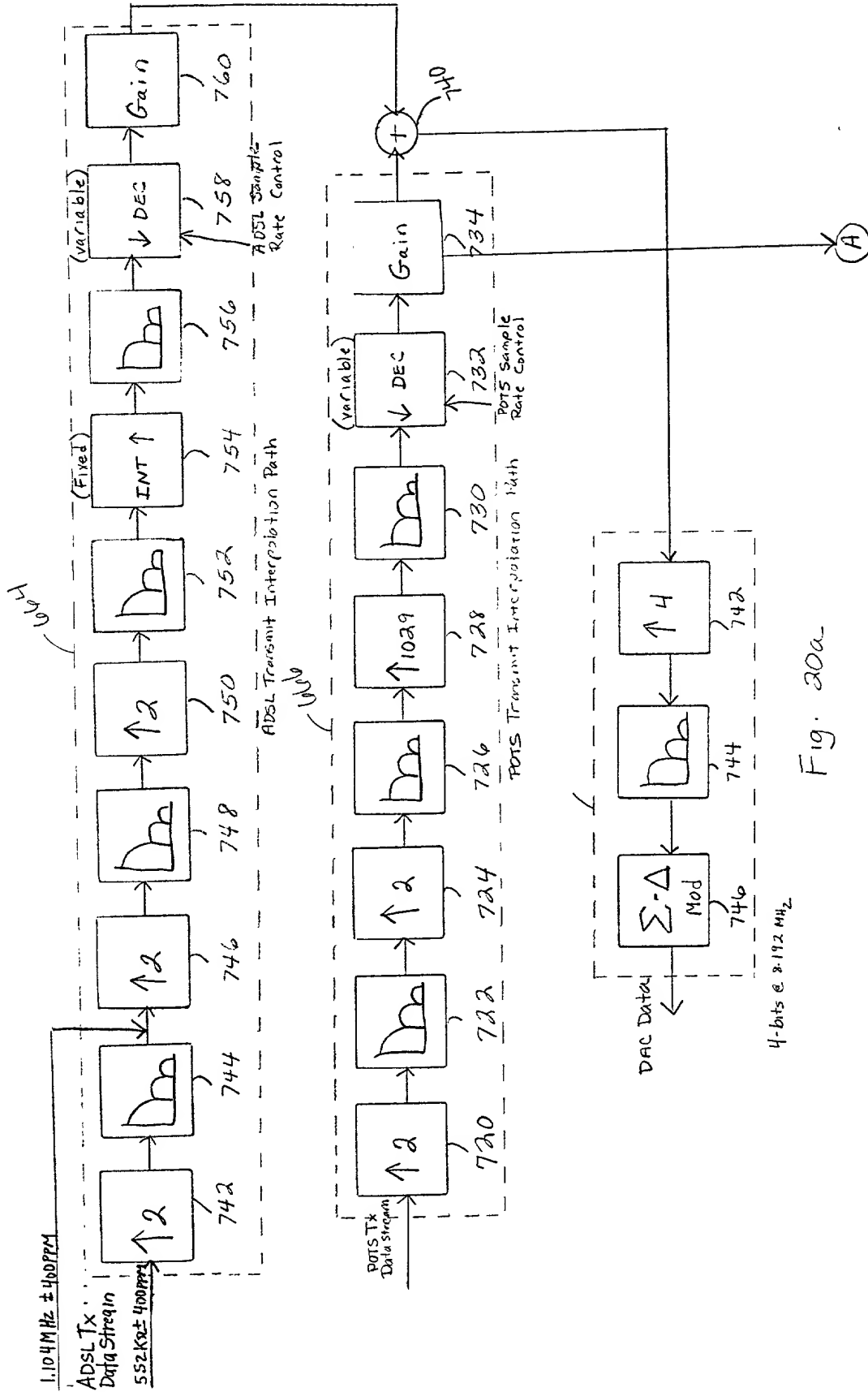


Fig. 19



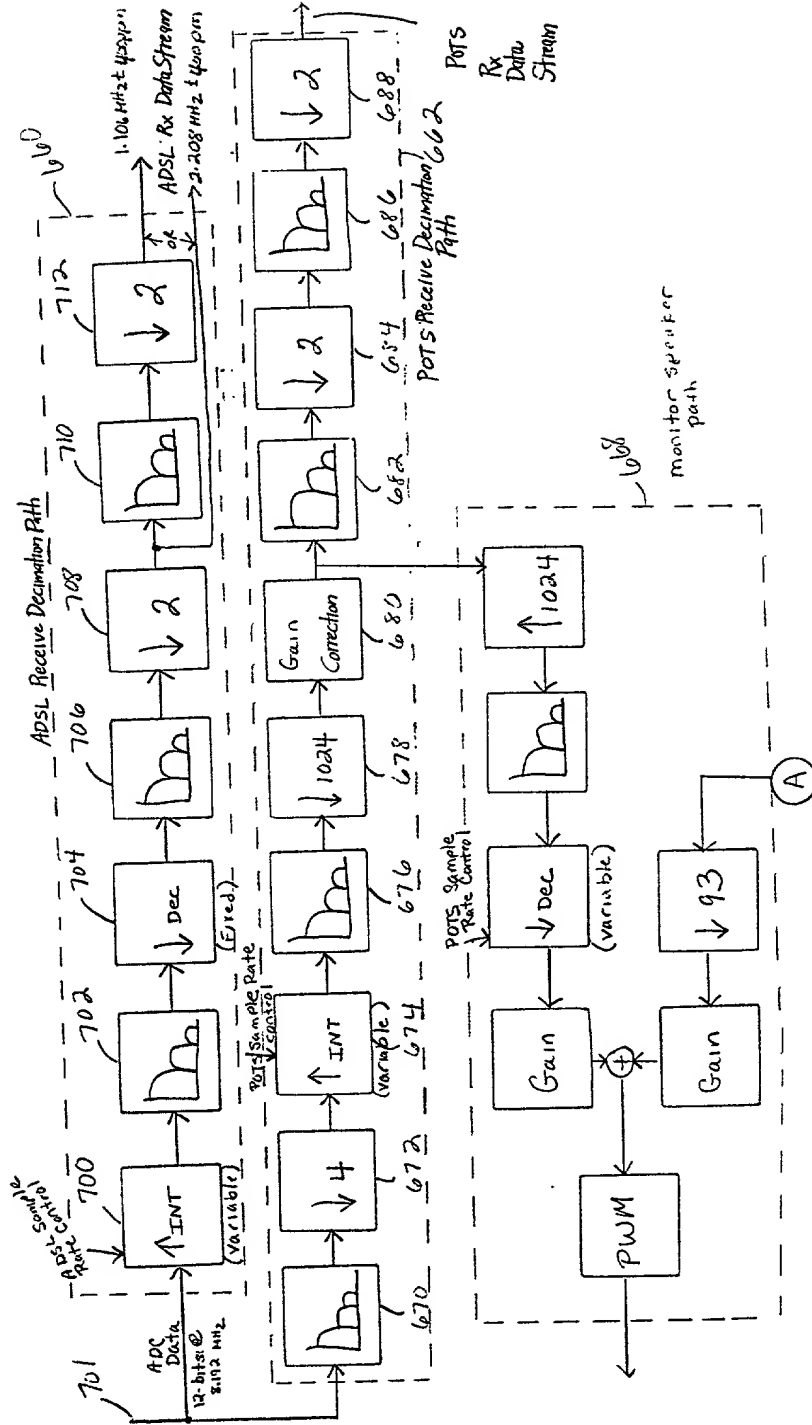
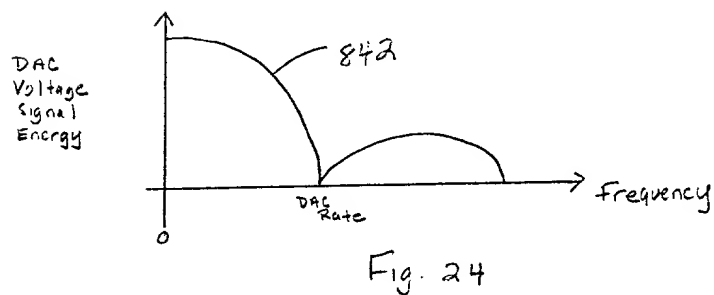
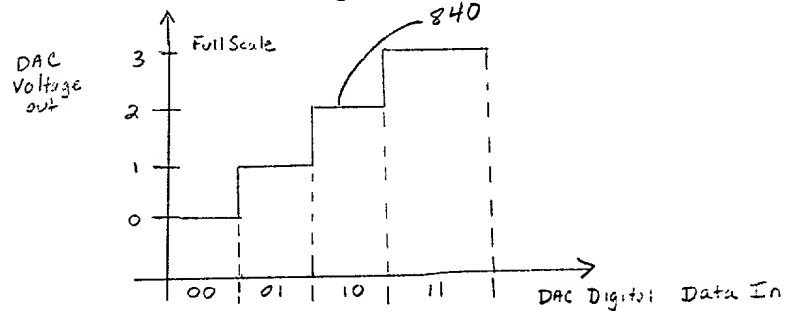
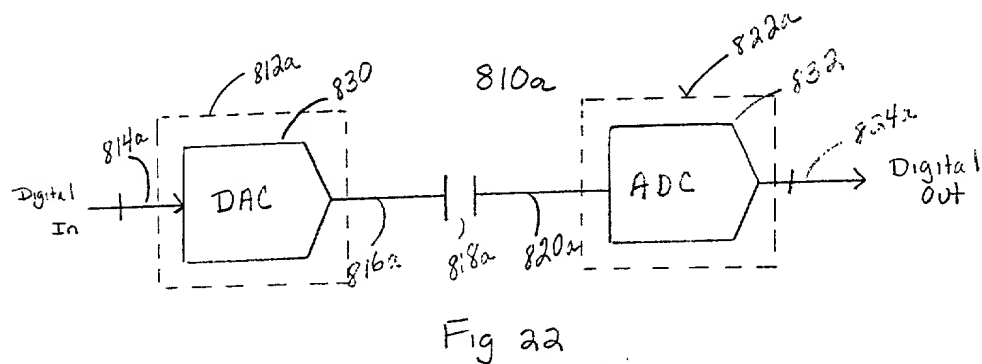
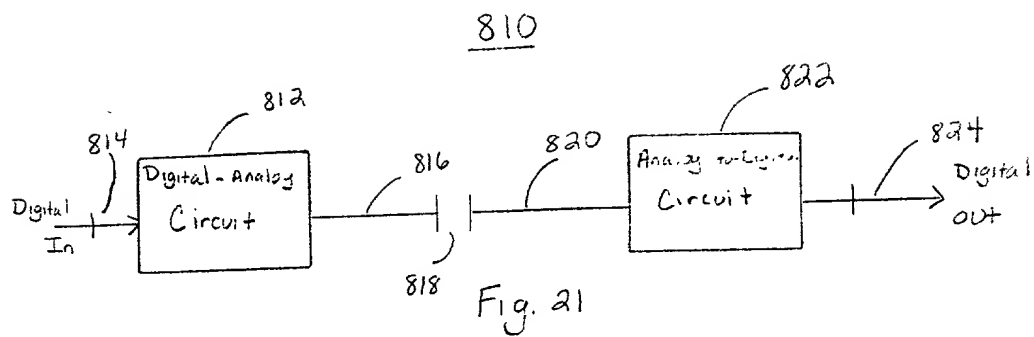


Fig 20b



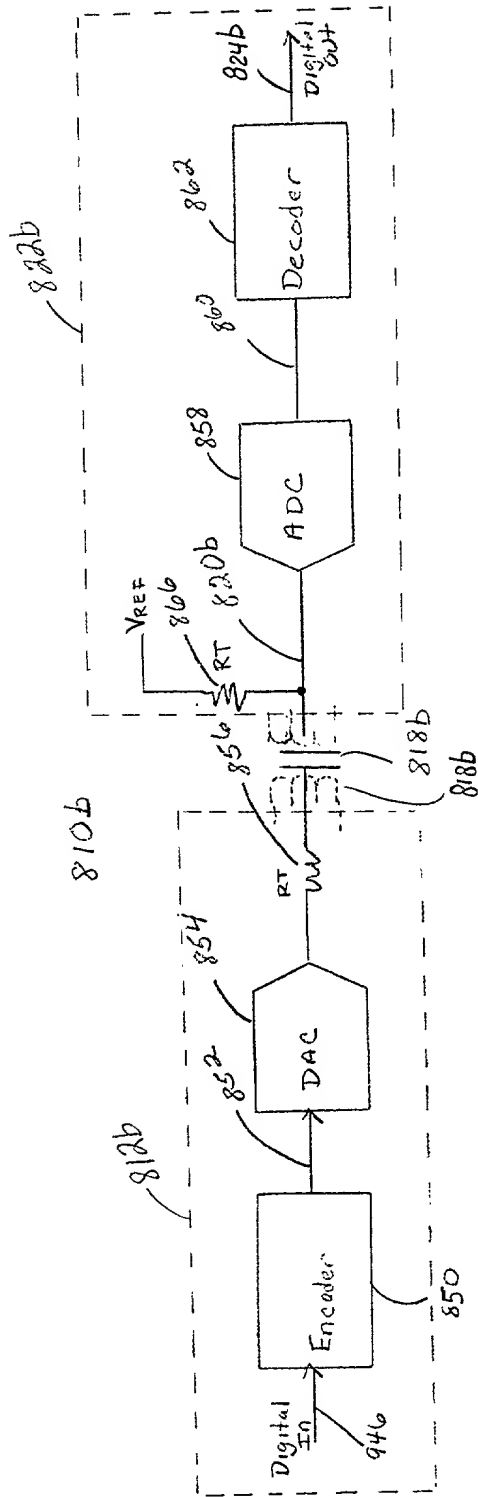


Fig 25

ENCODER

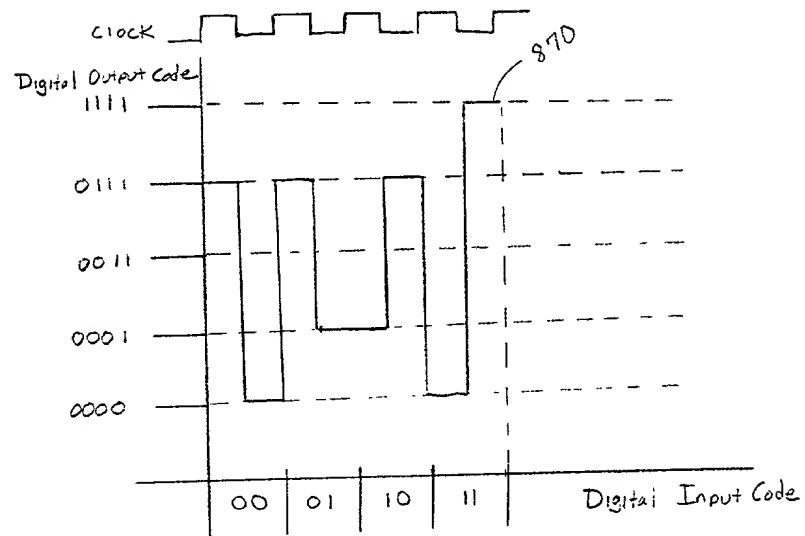


Fig. 26

DA2

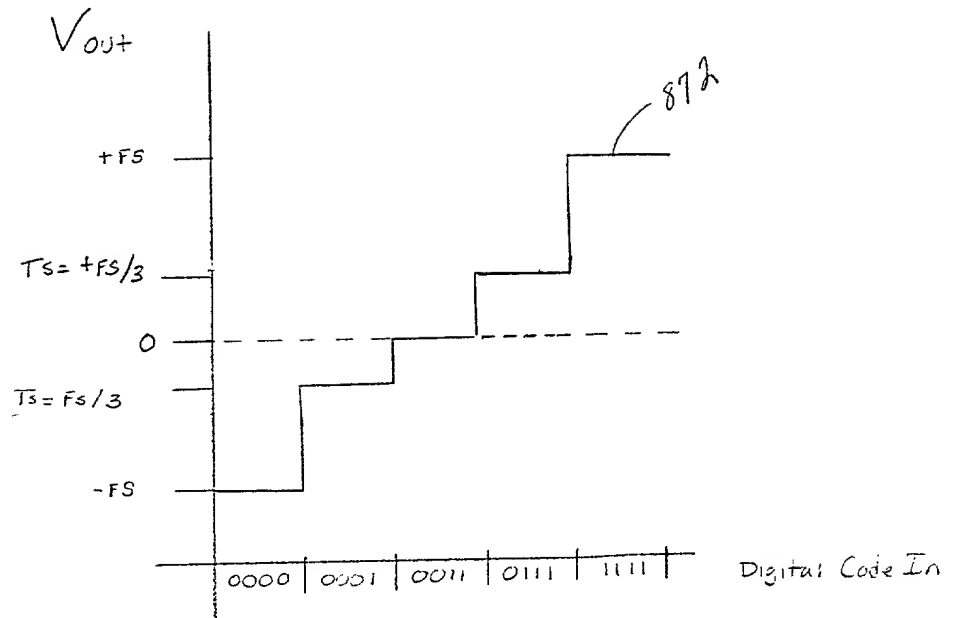


Fig. 27

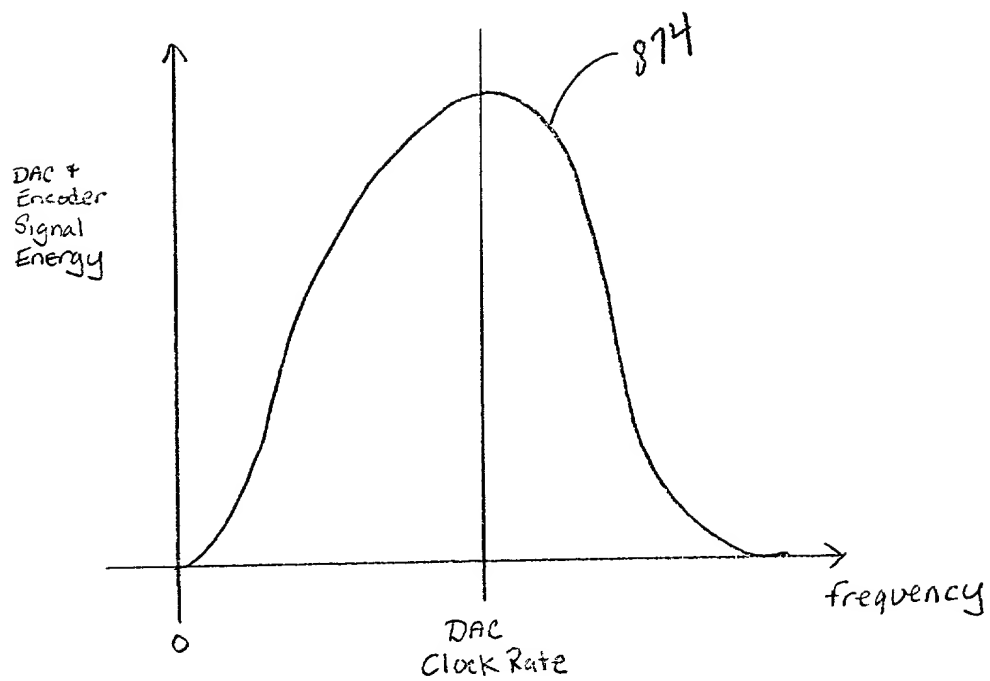


Fig. 28

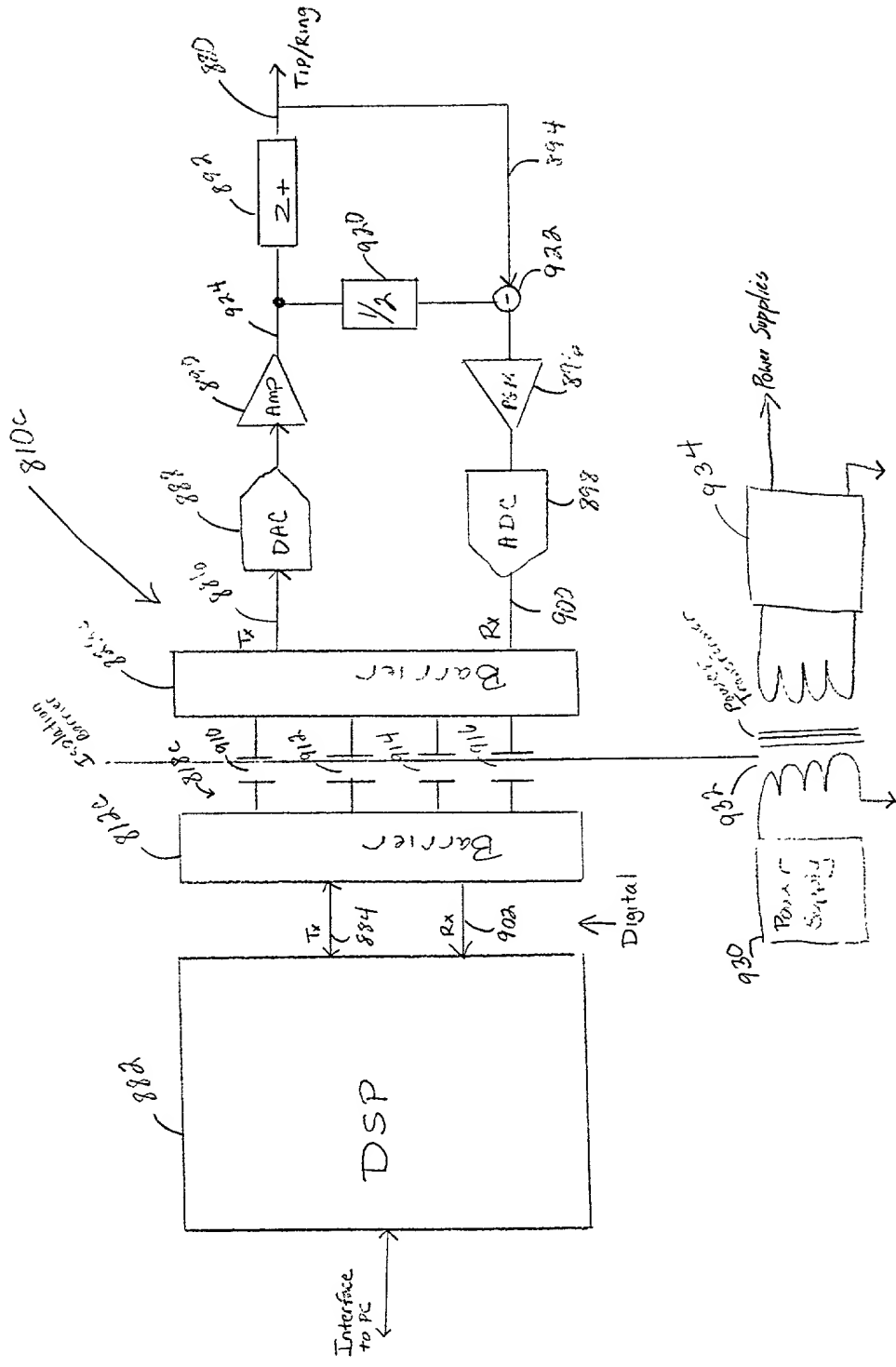


FIG. 10

Full Barrier System

810e

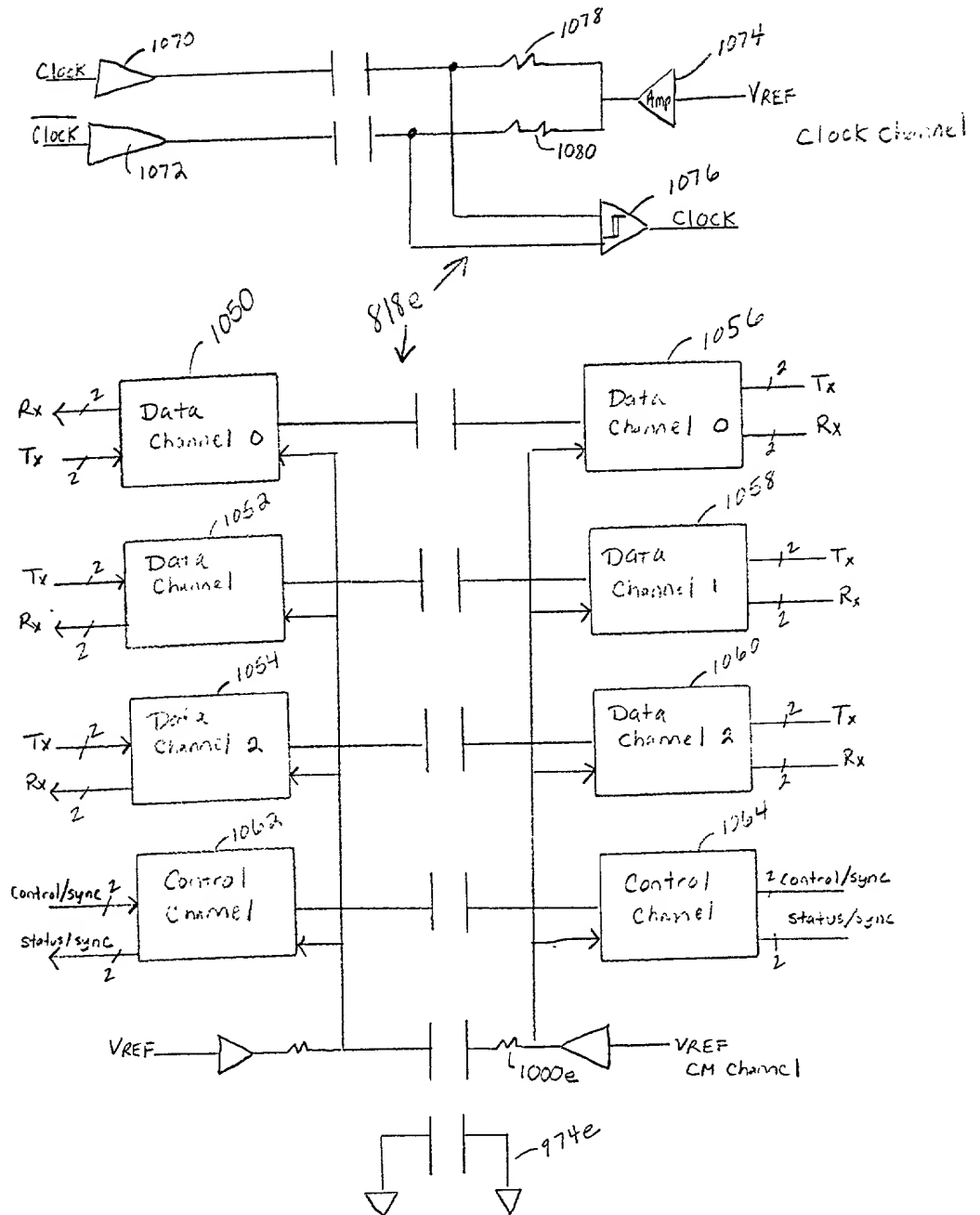


Fig. 31

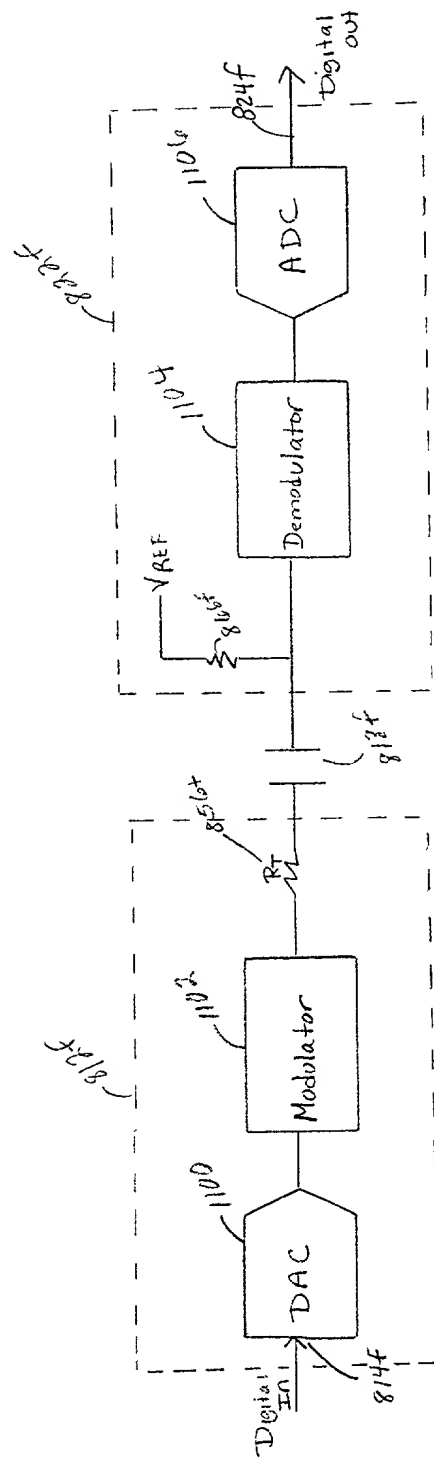


Fig. 32